UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/562,285 | 12/22/2005 | Johannes Joseph Hubertina Barbara Schleipen | NL 030750 | 5725 |

24737 7590 07/25/2008
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

| EXAMINER | |
|---|---|
| PATANKAR, ANEETA V | |
| ART UNIT | PAPER NUMBER |
| 2627 | |
| MAIL DATE | DELIVERY MODE |
| 07/25/2008 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/562,285 | SCHLEIPEN ET AL. | |
| | Examiner | Art Unit | |
| | Aneeta Patankar | 2627 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/15/2007, 12/22/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,285,692 to *Okayasu* in view of U.S. Patent No. 6,574,257 to *Thronton et al.* in further view of U.S. Patent No. 4,019,048 to *Maione et al.*

As to **claim 1**, *Okayasu* discloses a method of controlling a diode laser device which is operable to receive a control signal and to output an optical signal when the control signal exceeds a threshold value, the method comprising: supplying a control signal to the diode laser device at a predetermined turn-on time (Fig. 1, columns 3-4, lines 59-5), where Fig. 1 shows a controller for controlling the predetermined turn-on time, and characterized by supplying to the diode laser device a control signal, at a predefined time before the predetermined turn-on time (Fig. 1, columns 3-4, lines 59-5), where the predefined time is the time determined by the controller in Fig. 1.

*Okayasu* is deficient in disclosing a method of controlling a diode laser device which is operable to receive a control signal and to output an optical signal when the control signal exceeds a threshold value, the method comprising: supplying a bias signal having a value which exceeds the threshold value

characterized by supplying to the diode laser device, the predefined time, magnitude, and time period of the pre- bias signal determining a required output power profile of the output optical signal.

However, *Thronton* discloses a method of controlling a diode laser device which is operable to receive a control signal and to output an optical signal when the control signal exceeds a threshold value, the method comprising: supplying a bias signal to the diode laser device, wherein the bias signal has a value which exceeds the threshold value. (Fig. 3, column 11, lines 5-7).

At the time of invention, it would have been obvious to a person of ordinary skilled it the art to have created a method of controlling a diode laser device where a control signal is sent to the laser diode at a predetermined turn-on time as taught by *Okayasu* and having a bias signal value that exceeds the threshold value as taught by *Thronton*. The suggestion/motivation would have been to insure that the output power fluctuation is minimal (*Thronton*, column 3, lines 25-34).

*Okayasu* is deficient in disclosing discloses a method of controlling a diode laser device which is operable to receive a control signal and to output an optical signal when the control signal exceeds a threshold value, the method comprising: the predefined time, magnitude, and time period of the pre- bias signal determining a required output power profile of the output optical signal.

However, *Maione* discloses a method of controlling a diode laser device which is operable to receive a control signal and to output an optical signal when

the control signal exceeds a threshold value, the method comprising: the predefined time, magnitude, and time period of the pre- bias signal determining a required output power profile of the output optical signal (Fig. 4, columns 10-11, lines 35-9).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have a method of controlling a diode laser device where a control signal is sent to the laser diode at a predetermined turn-on time as taught by *Okayasu* and a method where the predefined time, magnitude, and time period of the pre-bias signal determining requires an output power profile of the output optical signal as taught by *Maione*. The suggestion/motivation would have been to create a prebias current in order to be able to exceed the threshold value at an appropriate time to create a substantial optical pulse (*Maione*, Fig. 4, columns 10-11, lines 35-9).

As to **claim 2**, *Maione* discloses a method wherein the pre- bias signal comprises a series of pre-bias pulses, having respective predefined times, magnitudes and extents, wherein the combination of the plurality of pre-bias pulses causes the output optical signal to have the required power profile (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection in claim 1.

As to **claim 3**, *Maione* discloses a method wherein the pre- bias signal is a stepped value (Fig. 4, column 10-11, lines 35-9). In addition, the same motivation is used as the rejection in claim 1.

As to **claim 4**, *Maione* discloses a method wherein the predetermined turn-on time is defined by a clock signal (Fig. 3, column 10, lines 12-32). *Maione* describes that a 1 represents on and a 0 represents off. In addition, the same motivation is used as the rejection in claim 1.

As to **claim 5**, *Thronton* discloses a method wherein the predetermined turn-on time is determined by a required output power profile of the output optical signal (Column 2, lines 30-55). *Thronton* describes that the resulting changes in laser threshold and output power can limit data rates due to turn-on delays, therefore the turn-on time is dependent on the output power profile. In addition, the same motivation is used as the rejection for claim 1.

As to **claim 6**, *Maione* discloses a method wherein the value of the pre-bias signal is determined by a required output power profile of the output optical signal (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection to claim 1.

As to **claim 7**, *Okayasu* discloses a method of controlling a diode laser device in an optical system, the system including a laser diode device a controller, wherein the laser diode device is operable to receive a control signal from the controller and to output an optical signal when the control signal exceeds a threshold value, the method comprising: supplying, to the diode laser device as the control signal and at a predetermined turn-on time (Fig. 1, columns 3-4, lines 59-5), characterized by supplying to the diode laser device, as the

control signal and at a predefined time before the predetermined turn-on time (Fig. 3, column 6, lines 1-16).

*Okayasu* is deficient in disclosing a method of controlling a diode laser device in an optical system, the system including a laser diode device a controller, wherein the laser diode device is operable to receive a control signal from the controller and to output an optical signal when the control signal exceeds a threshold value, the method comprising: a bias signal having a value which exceeds the threshold value, a pre-bias signal, which has a magnitude less than the threshold value and extends for a time period, the predefined time, magnitude, and time period of the pre- bias signal determining a required output power profile of the output optical signal.

However, *Thronton* discloses a method of controlling a diode laser device in an optical system, the system including a laser diode device a controller, wherein the laser diode device is operable to receive a control signal from the controller and to output an optical signal when the control signal exceeds a threshold value, the method comprising: a bias signal having a value which exceeds the threshold value (Fig. 3, column 11, lines 5-23).

At the time of invention, it would have been obvious to a person of ordinary skilled it the art to have created a method of controlling a diode laser device where a control signal is sent to the laser diode at a predetermined turn-on time as taught by *Okayasu* and having a bias signal value that exceeds the threshold value as taught by *Thronton*. The suggestion/motivation would have

been to insure that the output power fluctuation is minimal (*Thronton*, column 3, lines 25-34).

*Okayasu* is deficient in disclosing a method of controlling a diode laser device in an optical system, the system including a laser diode device a controller, wherein the laser diode device is operable to receive a control signal from the controller and to output an optical signal when the control signal exceeds a threshold value, the method comprising: a pre-bias signal, which has a magnitude less than the threshold value and extends for a time period, the predefined time, magnitude, and time period of the pre- bias signal determining a required output power profile of the output optical signal.

However, *Maione* discloses a method of controlling a diode laser device in an optical system, the system including a laser diode device a controller, wherein the laser diode device is operable to receive a control signal from the controller and to output an optical signal when the control signal exceeds a threshold value, the method comprising: a pre-bias signal, which has a magnitude less than the threshold value and extends for a time period, the predefined time, magnitude, and time period of the pre- bias signal determining a required output power profile of the output optical signal (Fig. 4, columns 10-11, lines 35-9).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have a method of controlled a diode laser device where a control signal is sent to the laser diode at a predetermined turn-on time as taught by *Okayasu* and a method where the predefined time, magnitude, and

time period of the pre-bias signal determining requires an output power profile of the output optical signal as taught by *Maione*. The suggestion/motivation would have been to create a prebias current in order to be able to exceed the threshold value at an appropriate time to create a substantial optical pulse (*Maione*, Fig. 4, columns 10-11, lines 35-9).

As to **claim 8**, *Maione* discloses a method wherein the pre- bias signal comprises a series of pre-bias pulses, having respective predefined times, magnitudes and extents, wherein the combination of the plurality of pre-bias pulses causes the output optical signal to have the required power profile (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection in claim 7.

As to **claim 9**, *Maione* discloses a method wherein the pre- bias signal is a stepped value (Fig. 4, columns 10-11, lines 35-9). *Maione* describes pulses which has the same shape as a step. In addition, the same motivation is used as the rejection in claim 7.

As to **claim 10**, *Maione* discloses a method wherein the predetermined turn-on time is defined by a clock signal (Fig. 3, column 10, lines 12-32) where a 1 represents on and a 0 represents off. In addition the same motivation is used as the rejection in claim 7.

As to **claim 11**, *Thronton* discloses a method wherein the predetermined turn-on time is determined by a required output power profile of the output optical signal (Column 2, lines 30-55). *Thronton* describes that the resulting changes in

laser threshold and output power can limit data rates due to turn-on delays, therefore the turn-on time is dependent on the output power profile. In addition, the same motivation is used as the rejection in claim 7.

As to **claim 12**, *Maione* discloses a method wherein the value of the pre-bias signal is determined by a required output power profile of the output optical signal (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection in claim 7.

As to **claim 13**, *Okayasu* discloses an optical system comprising,

a controller operable to output a control signal (Fig. 1, columns 3-4, lines 59-5); and a laser diode device operable to receive a control signal from the controller (Fig. 1, columns 3-4, lines 59-5), wherein the controller is operable to output to the laser diode device (Fig. 1, columns 3-4, lines 59-5), characterized in that the controller is operable to output to the laser diode device, as the control signal and before the predetermined turn-on time (Fig. 3, column 6, lines 1-16).

*Okayasu* is deficient in disclosing an optical system comprising: output an optical signal when the control signal exceeds a threshold value, as the control signal and before the predetermined turn-on time, a pre-bias signal to the laser diode device, a pre-bias signal to the laser diode device, which pre-bias signal has a magnitude less than the threshold value and extends for a time period, the predefined time.

However, *Thronton* discloses an optical system comprising: output an optical signal when the control signal exceeds a threshold value (Fig. 3, column

11, lines 5-23), as the control signal and before the predetermined turn-on time, a pre-bias signal to the laser diode device (Fig. 3, column 11, lines 5-23).

At the time of invention, it would have been obvious to a person of ordinary skilled it the art to have created a method of controlled a diode laser device where a control signal is sent to the laser diode at a predetermined turn-on time as taught by *Okayasu* and having a bias signal value that exceeds the threshold value as taught by *Thronton*. The suggestion/motivation would have been to insure that the output power fluctuation is minimal (*Thronton*, column 3, lines 25-34).

However, *Maione* discloses an optical system comprising: a pre-bias signal to the laser diode device, a pre-bias signal to the laser diode device, which pre-bias signal has a magnitude less than the threshold value and extends for a time period, the predefined time (Fig. 4, columns 10-11, lines 35-9).

*Okayasu, Thronton,* and *Maione* are analogous art because they are from the same field of endeavor with respect to optical devices.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have a method of controlled a diode laser device where a control signal is sent to the laser diode at a predetermined turn-on time as taught by *Okayasu* and a method where the predefined time, magnitude, and time period of the pre-bias signal determining requires an output power profile of the output optical signal as taught by *Maione*. The suggestion/motivation would have been to create a prebias current in order to be able to exceed the threshold

value at an appropriate time to create a substantial optical pulse (*Maione*, Fig. 4, columns 10-11, lines 35-9).

As to **claim 14**, *Maione* discloses an optical system wherein the controller is operable to supply a pre-bias signal comprising a series of pre-bias pulses, having respective predefined times, magnitudes and extents, wherein the combination of the plurality of pre-bias pulses causes the output optical signal to have the required power profile (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection in claim 13.

As to **claim 15**, *Maione* discloses an optical system wherein the controller is operable to supply a multi-valued pre-bias signal to the laser diode device (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection for claim 13.

As to **claim 16**, *Okayasu* discloses an optical system wherein the controller is operable to output to the laser diode device as the control signal and before the predetermined turn-on time (Fig. 1, columns 3-4, lines 59-5).

*Okayasu* is deficient in disclosing an optical system where a pre-bias signal, which has a value less than the threshold value, and is defined by a clock signal of the system.

However, *Maione* discloses an optical system where a pre-bias signal, which has a value less than the threshold value (Fig 1, columns 3-4, lines 59-5), and is defined by a clock signal of the system (Fig. 3, column 10, lines 12-32). In addition, the same motivation is used as the rejection in claim 13.

As to **claim 17**, *Okayasu* discloses an optical system wherein the controller is operable to output to the laser diode device as the control signal and before the predetermined turn-on time (Fig. 1, columns 3-4, lines 59-5).

*Okayasu* is deficient in disclosing an optical system wherein a pre-bias signal which has a value less than the threshold value, wherein the controller is operable to determine the predetermined turn-on time by a required output power profile of the output optical signal.

However, *Thronton* discloses an optical system wherein the controller is operable to determine the predetermined turn-on time by a required output power profile of the output optical signal (Fig. 4, columns 10-11, lines 35-9).

However, *Maione* discloses an optical system wherein a pre-bias signal which has a value less than the threshold value (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection for claim 13.

As to **claim 18**, *Okayasu* discloses an optical system wherein the controller is operable to output to the laser diode device as the control signal and before the predetermined turn-on time (Fig. 1, columns 3-4, lines 59-5).

*Okayasu* is deficient in disclosing an optical system wherein the controller is operable to determine the value of the pre-bias signal by a required output power profile of the output optical signal.

However, *Maione* discloses an optical system wherein the controller is operable to determine the value of the pre-bias signal by a required output power

profile of the output optical signal (Fig. 4, columns 10-11, lines 35-9). In addition, the same motivation is used as the rejection in claim 13.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aneeta Patankar whose telephone number is (571) 272-9773. The examiner can normally be reached on Monday-Thursday 8-5, Second Friday, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aneeta Patankar
Patent Examiner
Art Unit 2627

/Andrea L Wellington/
Supervisory Patent Examiner, Art Unit 2627